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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/089,308	03/29/2002	Hubert De Steur	32860-000293/US	7364

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EXAMINER

VINH, LAN

ART UNIT PAPER NUMBER

1765

DATE MAILED: 01/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/089,308

Applicant(s)

STEUR ET AL.

Examiner

Lan Vinh

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☒ Certified copies of the priority documents have been received in Application No. 10089308.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 0104. 6) ☐ Other:

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1, 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 1 and 13, it is not clear what it means by pulse frequency of greater or equal 20 as no dimension for the value is provided.

3. For the purpose of examination, the limitation of "pulse frequency of greater or equal 20", is best understood by the examiner as a pulse frequency of greater or equal 20 Hz.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 2, 13 are rejected under 35 U.S.C. 102(b) as being anticipated by O'Brien et al (US 6,203,952)

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O'Brien discloses a method for forming an image or pattern on a substrate coated with organic material using a high energy source such as laser (col 1, lines 6-9; col 5, lines 4-5). This method comprising: using a frequency-doubled neodymium vanadate laser for the laser ablating (col 5, lines 45-57), which reads on using a frequency-doubled neodymium vanadate laser for the laser drilling. O'Brien also discloses that the pulse width of the laser is in the 10-100 ns (col 5, lines 39-40), which overlaps the claimed range of < 40 ns, the laser beam with a repetition rate of 75 Hz (col 9, lines 32-34), which reads on the claimed of greater or equal to 20, the neodymium has a wavelength of 532 nm (col 5, lines 58-59).

Regarding claim 2, O'Brien laser pulse width in the 10-100 ns overlaps the claimed range of <30 ns

The limitations of claim 13 have been discussed above.

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 3-4, 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Brien et al (US 6,203,952) in view of Reedy (US 4,649,624)

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O'Brien method has been described above. Unlike the instant claimed inventions as per claims 3-4, 14-15, O'Brien fails to disclose using a focused laser beam with a spot diameter of between 10 microns and 100 microns.

However, Reedy discloses a method for fabricating a semiconductor device using laser beam having focused beam spot size of approximately 60 microns (col 8, lines 35-38). Reedy also discloses that the focused beam spot size can be varied (col 8, lines 47-49)

Hence, one skilled in the art would have found it obvious to modify O'Brien method by using laser beam having focused beam spot size of approximately 60 microns as per Reedy because according to Reedy, silicon is preferably melted by focused laser beam to create device quality silicon films (col 7, lines 25-30)

8. Claims 5-9, 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Brien et al (US 6,203,952) in view of Mercx et al (US 5,866,644)

O'Brien method has been described above. Unlike the instant claimed inventions as per claims 5-9, 16-17, O'Brien fails to disclose admixing 0.1% by weight to 5.0% by weight of organic pigment with the organic material.

Mercx, in a composition for laser marking, discloses that 0.01 to 4 % by weight of organic red pigment can be added to the organic coating (col 3, lines 9-12; col 5, example 1)

One skilled in the art would have found it obvious to modify O'Brien method by admixing 0.01% by weight to 4 % by weight of organic pigment with the organic

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material as per Mercx because Mercx discloses that pigments are generally present in an amount from 0.01-4 % by weight /a sufficient amount of dark pigment for forming a dark background coloration (col 3, lines 8-14)

9. Claims 10-12, 18-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Brien et al (US 6,203,952) in view of Mercx et al (US 5,866,644) and further in view of Mercx et al (US 6,214,916)

O'Brien as modified by Mercx (644) has been described above. Unlike the instant claimed inventions as per claims 10-12, 18-29, O'Brien and Mercx (644) fail to disclose the specific degrees of absorption as a result of the admixing of the additives.

Mercx (916), in a composition for laser marking, discloses that the mechanism by which theses additives (pigment ) work is though to be a combination of increased absorption of the laser light ( col 2, lines 38-41). Thus, Mercx serves as evidence that the degree of absorption is a result effective variable.

One skilled in the art would have found it obvious to modify O'Brien and Mercx (644) by discovering the optimum value for the degree of absorption because Mercx (916) discloses that this is result effective variable in the same field of endeavor.

***Conclusion***

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lan Vinh whose telephone number is 571 272 1471.

The examiner can normally be reached on M-F 8:30-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nadine Norton can be reached on 571 272 1465. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308-0661.



LV

January 6, 2004